EXHIBIT A

CURRICULUM VITAE
JOHN RODERICK MORRISON PHD

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Date of Birth: June 7, 1961

Citizenship: Australian

Current appointment: Chief Scientific Officer – CopyRat Pty Ltd

Academic Qualifications:

1991	Ph.D. (Medicine), The University of Melbourne
1986:	BSc (Hons, The University of Melbourne

Awards:

1986-90	Baker Medical Research Institute PhD Scholarship
1991-92	American Heart Association Post-doctoral Scholarship
2003-	Honorary Senior Research Fellow – Monash University

Previous Appointments:

2001-02	Senior Scientist, Monash Institute of Reproduction and Development
1997-01	Scientist, Monash Institute of Reproduction and Development
1996-97	Scientist I, MRC, London, UK Supervisors: James Scott (MRC, UK)/ Edward M. Rubin (Lawrence Berkeley National Laboratory (LBNL), USA)
1992-96	Scientist II, MRC, London, UK Supervisors: James Scott (MRC, UK)/ Edward M. Rubin (LBNL, USA)
1990-92	Post-doctoral Fellow - UCSD, La Jolla, CA Supervisor: Ray C. Pittman

Industry Consultations:

1996-7	A genome-wide screen for secretory proteins Amgen, Inc.
1996-7	Knock-out of the plasminogen activated receptor-2 (PAR 2) COR Therapeutics, Inc.
1995	Development of artificial serum for embryonic stem cells LifeTechnologies Inc.

Funds raised:

Academic:			
2001-05	NH&MRC	Control of Reproductive Processes	$8.5M *
1999-01	ARC	Regulation of Morphogenesis in the testis	$180K
1999	SMURF	Nuclear transfer technology in the rat	$165K
1998	Monash IVF	A mouse model f Kennedy disease	$10K
Commercial:			
2002	CopyRat Pty Ltd	2nd round fund raising	$1.5M
2002-04	CopyRat Pty Ltd	ARC Linkage grant	$360K
2001-03	CopyRat Pty Ltd	START grant	$1M
2000	CopyRat Pty Ltd	1st round fund raising	$2M

* discontinued Dec 2002.

Local, national and internati nal profile: invited seminars

1996 Use of 2-D protein gels to identify RNA editing events. Department of Energy – Directors Special Seminar Series.
Berkeley CA.
1997 Apobec-1 knockout mouse. Institute of Reproduction and Development. Melbourne Australia.
1998 From Molecular Biology to Genomics. Department of Urology, Monash Medical Centre.
1998 RNA editing made easy. Department of Biological Sciences, Monash University
1998 Human Genome Project. Department of Physiology Post-graduate Seminar Series.
2001 A mouse model of Kennedy disease. Guy's Hospital, London UK.
2001 Developing rat knockout technology. Hammersmith Hospital London UK.
2001 A mouse model of Kennedy disease. Institute of Psychiatry, King's College, London UK.
2001 A mouse model of Kennedy disease. NINDS (NIH) Bethesda, USA.
2001 A mouse model of Kennedy disease. Department of Biological Sciences, Monash University.
2003 Developing technology supporting knockouts in the rat. Rat Physiological Genomics Meeting, Cold Spring Harbor, NY.

COMMERCIAL EXPERIENCE:

I am a founding scientist and Chief Scientific Officer (CSO) of CopyRat Pty Ltd. This is a spin-out of Monash Institute of Reproduction and Development. The project was initiated in 1998 by a small group of Institute scientists. Initial funding was obtained using a Monash strategic grant. I worked with Robert Klupacs, then COO of Monash Institute, to develop a business plan for "CopyRat" which we presented to a variety of VCs and business angels. In August 2000, two separate groups of investors offered to provide seed capital to develop the CopyRat technology. One group was chosen on the basis of the financial support that they offered. I was immediately installed as CSO, however this only became a full-time position in January 2003 as I also maintained a full-time academic research program.

CopyRat plans to develop novel technology supporting gene targeting in the rat. CopyRat has been officially operating since December 2000. To date total funds raised to support this venture exceeds $5M. 5 patents are currently under submission. CopyRat has licensed a number of complementary technologies or alternately developed its own technology in an effort to carve out a clear and unimpeded product line. The short-term goals for the company are to develop rat models suitable for medical and pharmaceutical research. While CopyRat is primarily a R&D company it is envisaged that primary business will become the generation of models for a broad customer base with high volume sales. The company has developed globally with collaborations, licensing deals and contracts in place or under development in USA, France, Japan and Singapore. CopyRat also has a wholly own subsidiary, IngenKO Pty Ltd, which is a mouse knockout business. Currently IngenKO consists of about 15 scientists developing mouse models for medical research and pharmaceutical research on a fee-for-service basis. While this company has a proven track record in producing mouse models there are significant issues regarding the management of personnel and improving production efficiencies.

Current Role as CSO:

- Manage research team (10 scientists)
- Manage and develop R&D program
- Develop strategic view for CopyRat science and commercial development
- Technology acquisition and development
- To identify IP generated by the research program and to manage the internal IP portfolio

RESEARCH EXPERIENCE

(1997-2002) Monash Institute of Reproduction and Development

Kennedy disease mouse: My group has developed a mouse model of Kennedy disease. This is a world first which has been keenly contested between a number of laboratories. The mouse model will be invaluable for studying the pathological mechanisms leading to Kennedy disease. The model has a number of interesting properties i) there appears to be an apparent sensitivity of this model to testosterone; ii) the model appears to degenerate rapidly under caloric restriction. A paper reporting an initial description of this work was recently published in Human Molecular Genetics.

Regulation of Sertoli cell proliferation: The focus of these studies has been to understand the molecular mechanisms regulating the proliferative phase of the Sertoli cell. This has resulted in the development of novel methods for the isolation of ultra-pure preparations of cells as well as critical insights into the coordination of

factors regulating the proliferative phase. Two papers reporting these findings have recently been accepted for publication a further 3 papers are in preparation.

Follistatin biology: My group has completed the assembly of three follistatin genomic PAC clones representing a full-length gene and two alternate splicing transcripts. The full-length gene is currently being injected for transgene production. Mice are currently being breed onto the FS knockout background to assess the ability of this gene to rescue the ko mouse.

(1992-1997) Studies on the editing of apolipoprotein B RNA

I worked on a number of projects studying the biochemistry of apobec-1, the catalytic component required for the editing of apo-B RNA. I performed the initial enzymatic studies using oocyte extracts expressing apobec-1, which indicated that apobec-1 had cytidine deaminase activity. My most valuable contribution was to develop a mouse model which lacked Apobec-1, the catalytic subunit, required for apoB RNA editing. These studies were performed in Edward Rubin's lab at the Lawrence Berkeley National Laboratory (1994-1997). This project required that I isolate a mouse genomic clone of apobec-1, map the gene, and design and construct a targeting vector suitable for ablation of the gene in embryonic stem cells. Complementary to this work I have also made a transgenic mouse carrying a human P1 artificial chromosome (PAC) clone (140 kb), which should display the human expression pattern of *APOBEC-1*.

(1990-1992) Studies on the transfer of cholesteryl esters from high-density lipoprotein to the plasma membrane of cells and synthetic membranes

This project involved delineating a mechanism of transfer of cholesteryl esters (and neutral molecules in general) from high-density lipoprotein to cell membranes. Kinetic analysis revealed that this was a collision-mediated event which was able to proceed independent of other factors in either the lipoprotein or the cell membrane fractions. The work required a considerable amount of lipid chemistry, including the manufacture of very large uniform unilamella liposomes (a method I developed), chemical assembly of radiolabelled cardiolipin as well as the use of non-degradable tracers in both lipid and protein fractions.

(1986-1990) Determining the ligand binding domain of the high density lipoprotein receptor

I defined the binding domain of apolipoprotein AI (apo-AI) for a putative high-density lipoprotein receptor on the liver. To achieve this I had to first confirm that a binding site on the liver actually existed. Although there were more than one hundred papers on this subject my studies revealed that the reported low affinity/high capacity site did not follow the laws of mass action, required for a bona fide receptor. Subsequently, I described a new site which was of high affinity/low capacity. Using CNBr fragments of apo-AI bound to phospholipid discs, I determined that the receptor-binding domain resided in the carboxyl-terminus.

PUBLICATIONS

Patents:

1) A cellular composition including neural stem cells. (National Phase).
2) Targeting Methods and vectors and uses thereof. PCT filed Sept 2002
3) Generation of a rat neural stem cell with a long-term growth potential. PCT filed Nov 2002
4) A transgenic model for a neurodegenerative disorder. Provisional filed Jan 2002-12-10
5) Methods of generating non-human transgenic animals and cells derived therefrom. Provisional filed Nov 2002.

Research Papers:

1) Roh S, Malakooti N, Morrison JR, Trounson AO, Du ZT, (2003). *Parthenogenetic activation of rat oocytes and their development in vitro Reproduction, Fertility and Development*, 15, 1–6.
2) Roh S, Guo J, Malakooti N, Morrison JR, Trounson AO, Du ZT (2003) *Birth of rats following nuclear exchange at the 2-cell stage*, Zygote, In press.
3) Buzzard JJ, Wreford NG, Morrison JR, (2003) *Thyroid Hormone, Retinoic Acid and Testosterone Suppress Proliferation and Induce Markers of Differentiation in Cultured Rat Sertoli Cell. Endocrinology, In press.*
4) Buzzard JJ, Farnworth PG, de Kretser DM, O'Connor AE, Wreford NG, Morrison J (2003) *Proliferative Phase Sertoli Cells display a developmentally regulated response to Activin In Vitro. Endocrinology* 144: 474–483

5) McManamny P, Chy HS, Finkelstein DI, Crack PJ, Kola I, Cheema SS, Horne MK, Wreford NG, O'Bryan MK, de Kretser DM, Morrison JR (2002). *A mouse model of SBMA.* Human Molecular Genetics 11: 2103-2111.
6) Hickox DM, Gibbs, G, Morrison JR, Sebire K, Edgar K, Keah HH, Alter K, Loveland KL, Hearn MTW, de Kretser DM O'Bryan MK, (2002) *Identification of a novel mouse testis-specific member of the phosphotidylethanolamine binding protein family – PEBP2.* Biology of Reproduction. 67: 917-927
7) Buzzard JJ, Wreford NG, Morrison JR (2002) *Dramatic extension of the rat Sertoli cell proliferative phase using recombinant human FSH.* Reproduction 124: 633-641
8) Hayes E., Lacham-Kaplan O., Galea S., Verkuylen A., Pera M., Morrison J.R., Trounson A., (2001). *Nuclear transfer of normal and genetically modified somatic cells in the rat.* Physiol Genomics 5: 193-203.
9) Buzzard J.J., Morrison J.R., O'Bryan M.K., Song Q., and Wreford N.G., (2000). *The developmental expression of thyroid hormone receptors in the rat testis. Evidence for a novel thyroid hormone receptor transcript.* Biol. Reprod., 62: 664-669.
10) Morrison J.R., Pászty C., Stevens M.E., Hughes S.D., Forte T., Scott J., Rubin E.M. (1996) *Apolipoprotein B RNA editing enzyme-deficient mice are viable despite alterations in lipoprotein metabolism.* Proceedings of the National Academy of Sciences, 93: 7154-7159
11) Morrison JR; Silvestre MJ; Pittman RC. (1994) *Cholesteryl ester transfer between high density lipoprotein and phospholipid bilayers.* Journal of Biological Chemistry, 269:13911-8.
12) Bhattacharya S; Navaratnam N; Morrison JR; Scott J; Taylor WR. (1993) *Cytosine nucleoside/nucleotide deaminases and apolipoprotein B mRNA editing.* Trends in Biochemical Sciences, 19:105-6.
13) Navaratnam N; Morrison JR; Bhattacharya S; Patel D; Funahashi T; Giannoni F; Teng BB; Davidson NO; Scott J. (1993) *The p27 catalytic subunit of the apolipoprotein B mRNA editing enzyme is a cytidine deaminase.* Journal of Biological Chemistry, 268:20709-12.
14) Allan CM; Fidge NH; Morrison JR; Kanellos J. *Monoclonal antibodies to human apolipoprotein AI: probing the putative receptor binding domain of apolipoprotein AI.(1993)* Biochemical Journal, 290:449-55.
15) Morrison JR; McPherson GA; Fidge NH. (1992) *Evidence for two sites on rat liver plasma membranes which interact with high density lipoprotein.* Journal of Biological Chemistry, 267:13205-9.
16) Morrison J; Fidge NH; Tozuka M. (1991) *Determination of the structural domain of ApoAI recognized by high density lipoprotein receptors.* Journal of Biological Chemistry 266:18780-5.
17) Vanloo B; Morrison J; Fidge N; Lorent G; Lins L; Brasseur R; Ruysschaert JM; Bacrt J; Rosseneu M. (1991) *Characterization of the discoidal complexes formed between apoA-I-CNBr fragments and phosphatidylcholine.* Journal of Lipid Research, 32:1253-64.
18) Tetaz T; Morrison JR; Andreou J; Fidge NH. *Relaxed specificity of endoproteinase Asp-N: this enzyme cleaves at peptide bonds N-terminal to glutamate as well as aspartate and cysteic acid residues(*1990). Biochemistry International, 22:561-6.
19) Morrison JR; Fidge NH; Grego B. (1990) *Studies on the formation, separation, and characterization of cyanogen bromide fragments of human AI apolipoprotein.* Analytical Biochemistry 186:145-52.
20) Fidge N; Morrison J; Nugent T; Tozuka M. (1989) *Monoclonal antibodies to human A-I apolipoprotein and characterisation of cyanogen bromide fragments of apoA-I.* Biochimica et Biophysica Acta, 1003:84-90.
21) Tilley L; Sawyer WH; Morrison JR; Fidge NH. (1988) *Rotational diffusion of human lipoproteins and their receptors as determined by time-resolved phosphorescence anisotropy.* Journal of Biological Chemistry, 263:17541-7.
22) Simpson RJ; Smith JA; Moritz RL; O'Hare MJ; Rudland PS; Morrison JR; Lloyd CJ; Grego B; Burgess AW; Nice EC (1985). *Rat epidermal growth factor: complete amino acid sequence. Homology with the corresponding murine and human proteins; isolation of a form truncated at both ends with full in vitro biological activity.* European Journal of Biochemistry, 153:629-37.

Reviews:

1) Shyr-Yeu Lin[1,2], John R. Morrison[1], David J. Phillips[1] and David M. de Kretser[1,*] (2003) *The regulation of ovarian function by the TGF-β superfamily and follistatin* Reproduction, In press.
2) Scott J; Navaratnam N; Bhattacharya S; Morrison JR. *The apolipoprotein B messenger RNA editing enzyme.* Current Opinions in Lipidology, 1994, 5:87-93.